GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: MATH 205 DIVISION: 10 ALSO LISTED AS: MATH 205B

TERM EFFECTIVE: Fall 2018 **Inactive Course**

SHORT TITLE: ELEM ALGEBRA

LONG TITLE: Elementary Algebra

Units	Number of Weeks		Contact Hours/Week		Total Contact Hours
5	18	Lecture:	5	Lecture:	90
		Lab:	0	Lab:	0
		Other:	0	Other:	0
		Total:	5	Total:	90

COURSE DESCRIPTION:

This course is a standard beginning algebra course, including algebraic expressions, linear equations and inequalities in one variable, graphing, equations and inequalities in two variables, integer exponents, use of a scientific calculator, polynomials, rational expressions and equations, radicals and rational exponents, and quadratic equations. Mathematics 205, 205A and 205B, and 206 have similar course content. This course may not be taken by students who have completed Mathematics 205B or 206 with a grade of "C" or better. This course may be taken for Mathematics 205B credit (2.5 units) by those students who have successfully completed Mathematics 205A with a grade of "C" or better. PREREQUISITE: MATH 402 with a grade of 'Pass' or with a 'C' or better, or assessment test recommendation.

PREREQUISITES:

Completion of MATH 402, as UG, with a grade of C or better.
OR
Completion of MATH 402, as UG, with a grade of P or better.
OR
(Completion of MATH 404D, as UG, with a grade of C or better.
AND Completion of MATH 404E, as UG, with a grade of C or better.
AND Completion of MATH 404F, as UG, with a grade of C or better.)
OR
Completion of MATH 411, as UG, with a grade of C or better.
OR
Score of 18 on Algebra Readiness
OR
Score of 12 on Elementary Algebra
OR
Score of 30 on Algebra Readiness - Revised

OR
Score of 2400 on Accuplacer Math

COREQUISITES:

CREDIT STATUS: C - Credit - Degree Non Applicable

GRADING MODES
L - Standard Letter Grade

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:
02 - Lecture and/or discussion

STUDENT LEARNING OUTCOMES:

1. Simplify and evaluate expressions. Solve linear equations and inequalities in one variable and their applications.
Measure: Homework, Quizzes, Exams
ILO: 2

2. Evaluate and solve formulas.
Measure: Homework, Quizzes, Exams
ILO: 2

3. Graph linear equations and inequalities in two variables.
Measure: Homework, Quizzes, Exams
ILO: 2

4. Solve systems of equations and inequalities in two variables and their applications.
Measure: Homework, Quizzes, Exams
ILO: 2

5. Apply the laws of exponents to algebraic expressions. Use scientific notation and a scientific calculator.
Measure: Homework, Quizzes, Exams
ILO: 2

6. Define a polynomial and perform the operations of addition, subtraction, multiplication, and division of polynomials.
Measure: Homework, Quizzes, Exams
ILO: 2

7. Factor polynomials and solve polynomial equations in one variable.
Measure: Homework, Quizzes, Exams
ILO: 2

8. Simplify and add, subtract, multiply, and divide with rational expressions.

Measure: Homework, Quizzes, Exams
ILO: 2

9. Determine square roots, simplify radicals, and perform basic operations with radicals
Measure: Homework, Quizzes, Exams
ILO: 2

10. Solve quadratic equations by using the quadratic formula.
Measure: Homework, Quizzes, Exams
ILO: 2

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS
Inactive Course: 03/26/2018
As of Fall 2009, GAV GE B4 no longer applicable.
Each week, students will be expected to read assigned text sections and complete assigned homework.

5 Hours
Operations with fractions, order of operations, and simplifying expressions. SPO - Perform operations with fractions and simplify expressions.

5 Hours
Basic operations with real numbers, number lines, and simplifying expressions. SPO - Perform operations using the properties of real numbers and simplify expressions.

5 Hours
Solving linear equations. SPO - Use the properties of linear equations to solve them.

5 Hours
Applications of linear equations including formulas and some geometric applications. SPO - Utilize problem-solving strategies to solve applications. Evaluate and solve formulas.

5 Hours
Ratios, proportions, and their applications. Solving linear inequalities. SPO - Write and simplify ratios and proportions. Solve linear inequalities.

5 Hours
Graphs, linear equations in two variables, slopes and equations of a line. SPO - Read graphs and recognize and graph linear equations in two variables. Determine the slope and equation of a line.

5 Hours
Graph linear inequalities. Solve systems of linear equations by graphing, substitution, and elimination. SPO - Graph linear inequalities. Solve systems of linear equations by graphing, substitution, and elimination.

5 Hours
Applications of linear systems and the power and product rules of exponents. SPO - Utilize problem-solving strategies to solve applications. Apply the product and power rules of exponents.

5 Hours

Utilize the quotient rule for exponents. Write numbers in scientific notation and perform operations using a scientific calculator. Add, subtract, and multiply polynomials. SPO - Apply quotient rules for exponents. Write numbers using scientific notation. Use a calculator to perform operations with numbers in scientific notation. Add, subtract, and multiply polynomials.

5 Hours

Special products and dividing polynomials. Greatest common factors, factor by grouping and basic factoring of polynomials. SPO - Use special products to multiply polynomials. Divide polynomials. Factor polynomials using GCF and grouping. Factor trinomials.

5 Hours

Factoring trinomials, including special factoring rules. Solve quadratic equations by factoring. SPO - Factor trinomials of the form ax^2 +bx +c and solve equations of the same form by factoring.

5 Hours

Solve applications using quadratic equations. Introduce the quadratic formula using equations with rational solutions. Simplify rational expressions and add, subtract, multiply, and divide them. SPO - Solve applications using quadratic equations. Utilize factoring and the quadratic formula. Simplify rational expressions involving operations.

5 Hours

Evaluate roots and add, subtract, multiply, and simplify radicals. SPO - Evaluate square roots along with adding, subtracting, multiplying, and simplifying radicals.

5 Hours

Dividing radicals and rationalizing the denominators with radicals. SPO - Divide radicals and rationalize denominators.

5 Hours

Solve quadratic equations utilizing the quadratic formula where the solutions contain radicals. SPO - Solve quadratic equations that contain radicals.

5 Hours

Final exam.

METHODS OF INSTRUCTION:

Lecture/Discussion, question and answer, written exams, multimedia software.

METHODS OF EVALUATION:

CATEGORY 1 - The types of writing assignments required:

Percent range of total grade: 0 % to 0 %

If this is a degree applicable course, but substantial writing assignments are not appropriate, indicate reason

Course is primarily computational

CATEGORY 2 -The problem-solving assignments required:

Percent range of total grade: 70 % to 100 %

Homework Problems

Quizzes
Exams

CATEGORY 3 -The types of skill demonstrations required:
Percent range of total grade: 0 % to 0 %

CATEGORY 4 - The types of objective examinations used in the course:
Percent range of total grade: 0 % to 30 %
Other: Solving problems

CATEGORY 5 - Any other methods of evaluation:
Percent range of total grade: 0 % to 10 %

At instructor discretion

REPRESENTATIVE TEXTBOOKS:
Required:
Lial, Hornsby, and McGinnis, Elem. Algebra, 10th edition, Pearson, 2008, or other appropriate college level text.
Reading level of text: 12th gradeVerified by: Ken Wagman

ARTICULATION and CERTIFICATE INFORMATION
Associate Degree:
CSU GE:
IGETC:
CSU TRANSFER:
Not Transferable
UC TRANSFER:
Not Transferable

SUPPLEMENTAL DATA:
Basic Skills: B
Classification: Y
Noncredit Category: Y
Cooperative Education:
Program Status: 2 Stand-alone
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department:
CSU Crosswalk Course Number:
Prior to College Level: B
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N

Occupational Course: E
Maximum Hours:
Minimum Hours:
Course Control Number: CCC000203943
Sports/Physical Education Course: N
Taxonomy of Program: 170100